

CASE STUDY
LINUX LOYALTY SYSTEM

featured
UA Cinema Circuit Ltd.

ACISE CASE STUDY

Company Background

With 38 movie theatres at seven locations across Hong Kong, UA Cinemas now brings movie excitement to over five million people annually. Home to world-class sound systems and projection equipment, comfortable high-back seating and great snacks, you can be confident that seeing a movie at UA Cinemas is your passport to a world of thrilling entertainment.

Business Objective and Motivation of Implementing Linux Solutions

1. Establish stable operation system for minimize the maintenance cost of Mission Critical System.
2. Open Source platform enhances long-term further application development.

Deployment Scale and Scope

Country of deployment : HK
Number of IT users : 25,000
Total number of servers : 5
Number of servers running Linux : 5

Implementation Strategy

UA Loyalty Club is an e-Loyalty System on Linux platform designed to empower a Total Retail Loyalty Program. The system consists of smart card, automated kiosk, online website and loyalty management modules to invite customers to participate in the personalization of their own membership card. This engaging program has been deployed to promote new services, brand experience, customer loyalty and enable purchases as well as managing data with monitored results - the Customer Relationship Management (CRM).

The concept establishes a loyalty card infrastructure with the help of contactless smart card to build up e-bonus points for every purchase to accumulate for gift redemption. The photo kiosk has been set up to assist with the application process, printing and issuance of the personalized card on the spot. The contactless card reader included with the POS terminals allows members' bonus points to be updated and helps minimize processing time. Lastly, the loyalty kiosk is meant to offer a self-service interactive terminal featuring movie titles, previews, bonus points checking as well as reward redemption.

This engaging e-loyalty program is deployed with the main business goal to:

- promote new services and movies;
- offer compelling content;
- deliver interesting brand experience;
- impress and engage customers;
- enrol customers;
- enable purchases and repeated purchases;
- manage data with monitored results.

Linux Application, not only provide stability platform for Mission Critical servers (supports up to 25,000 members), but also gaining the advantage of Total Cost of Ownership.

This solution is honored the Merit Award under Office Automation and Business Application Category of the Linux Business Adoption Award 2003.



Implementation Process:

The implementation plan for this project involves the following milestones:

- confirmation of order;
- finalization of user requirements;
- system design, prototyping & customization;
- confirmation of smart card surface design;
- pre-printing and personalization of smart card;
- network, cabling and wiring works;
- installation of hardware and software;
- acceptance testing & training;
- pilot run & evaluation;
- full launch & commissioning.

Below are some highlights of UA's Linux Loyalty System:



Fig. 1



Fig. 2



Fig. 3



Fig. 4

Fig. 1: Online Website
 Fig. 2: Loyalty Management Module
 Fig. 3: Contactless Smart Card
 Fig. 4: Automated Kiosk

Customer's Comments:

"Since we launched UA Loyalty Club on July 11th this year, we have recruited over 28,000 members. An impressive figure, we believe that it is the second largest Contactless Smart Card System in Hong Kong. Acise Technology Ltd. demonstrated their expertise during the Linux implementation process. Along with MajorLink Communications Ltd., they provide the sophisticated hardware implementation that enhances the smooth running of our Loyalty System", said Bob Vallone, General Manager of UA Cinema Circuit Ltd.



Technology and Methodology Employed

TCP/IP Protocol, Tomcat, Java Development Kits (JDK), Apache Red Hat 7.0, Kiosk, Short Message Signal (SMS) and J2SE.

Innovative Areas

What we have built here is not just a Linux loyalty system. We are in fact building up a Loyalty E-frastructure. The smart card is able to carry the electronic bonus points on card. As it's not always possible to have access to central database, the data stored on card can actually be a proof of the points updates for rewards redemption in offline mode. The contactless "touch and go" concept provides the convenience that the customers enjoy. The more convenient the rewarding process, the more satisfying experience that the customer can get. Self-serve transaction is another key component that can encourage user involvement. This often helps the customer to own the loyalty building process. While all relevant data are captured into the customer database. The loyalty management software or data mining engine is able to analyze the customer's buying behavior and in particular compile personalized offers to target the right offer to the right customers. In addition to that, there is a messaging platform that is able to target the incentives through multi-channel access such as email or mobile SMS notification. The overall aim is to target the right offer to the right customer using the preferred channel at the right time.

Cost Benefit Analysis - Short Term and 5-year Total Cost of Ownership (TCO) Analysis

Price difference between project parts of existing Linux Operation System is as follows:

	Cost of Existing Linux Platform	Cost of Windows Platform
Web & Application Servers (2 pcs)	HK\$80,000 for hardware only	2 Operation System Windows 2000 Internet Connection HK\$34,000 and HK\$100,000 hardware is required to keep the same standard of performance
Database Server (2 pcs)	HK\$200,000 for hardware only	2 Operation System Windows 2000 Internet Connection Server cost HK\$34,000 and HK\$240,000 hardware is required to keep the same standard of performance
Gateway Server (1 pcs)	HK\$20,000 for hardware only	OEM Window 2000 Server cost HK\$8,000 and HK\$240,000 hardware is required to keep the same standard of performance
Program and Maintenance Cost for 1st year	HK\$400,000	HK\$500,000 as Windows Platform usually is the target of hacking and virus attacking
Project Amount Involves Platform Difference	HK\$700,000	HK\$940,000

Short-term Amount difference will be HK\$240,000 (34% difference).

Maintenance charge normally is 12% per year of Project amount and hence TCO is still 34% difference. Amount difference will be HK\$144,000 between 2 Operation System solutions for 5 years TCO. As it is mission critical operation project, amount saved by facilitating stable Linux platform cannot be estimated.

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